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Application Number: 10/511,807

MAY 22 2008

Attorney Docket: NL021156

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of coding an audio signal, the method comprising:
  - generating a monaural signal comprising a combination of at least two input audio channels,
  - determining a set of spatial parameters indicative of spatial properties of the at least two input audio channels, the set of spatial parameters including a parameter representing a measure of similarity of waveforms of the at least two input audio channels, and
  - generating an encoded signal comprising the monaural signal and the set of spatial parameters, wherein the step of generating an encoded signal comprising the monaural signal and the set of spatial parameters comprises generating a set of quantized spatial parameters, each introducing a corresponding quantization error relative to the corresponding determined spatial parameter, wherein at least one of the introduced quantization errors is controlled to depend on a value of at least one of the determined spatial parameters.
2. (Original) A method according to claim 1, wherein the step of determining a set of spatial parameters indicative of spatial properties comprises determining a set of spatial parameters as a function of time and frequency.
3. (Original) A method according to claim 2, wherein the step of determining a set of spatial parameters indicative of spatial properties comprises
  - dividing each of the at least two input audio channels into corresponding pluralities of frequency bands;
  - for each of the plurality of frequency bands determining the set of spatial parameters indicative of spatial properties of the at least two input audio channels within the corresponding frequency band.

Application Number: 10/511,807

Attorney Docket: NL021156

4. (Previously presented) A method according to any one of claim 1, wherein the set of spatial parameters includes at least one localization cue.

5. (Original) A method according to claim 4, wherein the set of spatial parameters includes at least two localization cues comprising an interchannel level difference and a selected one of an interchannel time difference and an interchannel phase difference.

6. (Previously Presented) A method according to claim 4, wherein the measure of similarity comprises information that cannot be accounted for by the localization cues.

7. (Previously Presented) A method according to claim 1, wherein the measure of similarity corresponds to a value of a cross-correlation function at a maximum of said cross-correlation function.

8. Cancelled.

9. (Currently Amended) An encoder for coding an audio signal, the encoder comprising:

- means for generating a monaural signal comprising a combination of at least two input audio channels,
- means for determining a set of spatial parameters indicative of spatial properties of the at least two input audio channels, the set of spatial parameters including a parameter representing a measure of similarity of waveforms of the at least two input audio channels, and
- means for generating an encoded signal comprising the monaural signal and the set of spatial parameters, wherein the encoded signal includes generating a set of quantized spatial parameters, each introducing a corresponding quantization error relative to the corresponding determined spatial parameter, wherein at least one of the introduced

Application Number: 10/511,807

Attorney Docket: NL021156

quantization errors is controlled to depend on a value of at least one of the determined spatial parameters.

10. (Original) An apparatus for supplying an audio signal, the apparatus comprising:  
an input for receiving an audio signal,  
an encoder as claimed in claim 9 for encoding the audio signal to obtain an encoded audio signal, and  
an output for supplying the encoded audio signal.

11. Cancelled.

12. (Currently Amended) A computer readable medium including code for a method of coding an audio signal, said medium comprising:  
code for generating a monaural signal comprising a combination of at least two input audio channels,  
code for determining a set of spatial parameters indicative of spatial properties of the at least two input audio channels, the set of spatial parameters including a parameter representing a measure of similarity of waveforms of the at least two input audio channels, and  
code for generating an encoded signal comprising the monaural signal and the set of spatial parameters, wherein the encoded signal includes generating a set of quantized spatial parameters, each introducing a corresponding quantization error relative to the corresponding determined spatial parameter, wherein at least one of the introduced quantization errors is controlled to depend on a value of at least one of the determined spatial parameters. ~~storage medium having stored thereon an encoded signal as claimed in claim 11.~~

Application Number: 10/511,807

Attorney Docket: NL021156

13. (Currently Amended) A method of decoding an encoded audio signal, the method comprising:

obtaining a monaural signal from the encoded audio signal, the monaural signal comprising a combination of at least two audio channels,

obtaining a set of spatial parameters from the encoded audio signal, ~~the set of spatial parameters including a parameter representing a measure of similarity of waveforms of the at least two audio channels~~, and

generating a multi-channel output signal from the monaural signal and the spatial parameters, the set of spatial parameters including a parameter representing a measure of similarity of waveforms of the multi-channel output signal, wherein the measure of similarity corresponds to a value of a cross-correlation function at a maximum of said cross-correlation function of the multi-channel output signal.

14. (Currently Amended) A decoder for decoding an encoded audio signal, the decoder comprising

means for obtaining a monaural signal from the encoded audio signal, the monaural signal comprising a combination of at least two audio channels, and

means for obtaining a set of spatial parameters from the encoded audio signal, ~~the set of spatial parameters including a parameter representing a measure of similarity of waveforms of the at least two audio channels~~, and

means for generating a multi-channel output signal from the monaural signal and the spatial parameters, the set of spatial parameters including a parameter representing a measure of similarity of waveforms of the multi-channel output signal, wherein the measure of similarity corresponds to a value of a cross-correlation function at a maximum of said cross-correlation function of the multi-channel output signal.

15. Cancelled.